

Appl. No. 09/488,390  
Amdt. dated April 30, 2004  
Reply to Office Action of January 30, 2004

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claim 1 (currently amended): An interactive entertainment apparatus comprising:

an entertainment device positionable in proximity to animate ~~and-or~~ inanimate objects, the entertainment device being capable of providing entertaining interaction with said animate ~~or-and~~ inanimate objects;

an acquisition device associated with said entertainment device, said acquisition device being adapted to acquire a representation of a facial characteristic of an object in proximity to said entertainment device, and said acquisition device being adapted to produce a signal relative to the acquired representation; and

a processor associated with said acquisition device in a manner to receive the produced signal from said acquisition device, said processor being adapted to compare the produced signal relative to data stored in memory and to provide an output signal indicative of recognition of a particular one of said animate or inanimate objects;

wherein the entertainment device provides said entertaining interaction in response to said output signal indicative of recognition.

Claim 2 (original): The interactive entertainment apparatus of claim 1, wherein said entertainment device comprises a toy.

Claim 3 (original): The interactive entertainment apparatus of claim 2, wherein said toy comprises a doll and said acquisition device is mounted to said doll.

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Claim 4 (original): The interactive entertainment apparatus of claim 2, wherein:  
said toy comprises a doll; and  
said acquisition device includes a camera contained within the head of said doll,  
said camera being situated to view objects located in front of the face of said doll.

Claim 5 (currently amended): The interactive entertainment apparatus of claim 4,  
wherein:

said processor is mounted ~~to~~ inside said doll ~~in a space defined by said doll.~~

Claim 6 (original): The interactive entertainment apparatus of claim 4, wherein:

said doll is a teddy bear; and  
said camera is mounted within the head of said teddy bear in a position to view  
objects through the eye of said teddy bear.

Claim 7 (original): The interactive entertainment apparatus of claim 1, wherein said  
entertainment device comprises a video game.

Claim 8 (original): The interactive entertainment apparatus of claim 1, wherein:

said acquisition device comprises a camera for acquiring a representation of all  
objects in proximity to said entertainment device;

said acquisition device is adapted to produce a signal relative to the acquired  
representation of all objects in proximity to said entertainment device; and

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said processor is adapted to locate a characteristic portion of said produced signal, the characteristic portion being a portion that corresponds to a facial characteristic of one of the objects in proximity to said entertainment device.

Claim 9 (original): The interactive entertainment apparatus of claim 8, wherein:

said processor is further adapted to store representations of produced signals received from said acquisition device; and

said processor is adapted to compare a representation of a received signal relative to signal representations previously stored by said processor, to determine whether the received signal corresponds with a previous signal, and, if so, to provide an output signal indicative of recognition.

Claim 10 (original): The interactive entertainment apparatus of claim 9, wherein:

said processor utilizes artificial intelligence to compare signal representations and determine whether the received signal corresponds with a previous signal.

Claim 11 (currently amended): An interactive entertainment apparatus comprising:

an entertainment device positionable in proximity to a person, the entertainment device capable of providing entertaining interaction with the person;

an acquisition device associated with said entertainment device, said acquisition device being adapted to acquire a representation of a biometric characteristic of the person in proximity to said entertainment device, and said acquisition device being adapted to produce a signal relative to the acquired representation; and

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a processor associated with said acquisition device in a manner to receive the produced signal from said acquisition device, said processor being adapted to compare the produced signal relative to data stored in memory and to provide an output signal indicative of recognition of a particular person;

wherein the entertainment device provides said entertaining interaction in response to said output signal indicative of recognition.

Claim 12 (currently amended): A toy comprising:

a camera and digitizer for acquiring representations of a human facial images;

a CPU associated with said camera and digitizer and capable of manipulating signals therefrom;

software resident on said CPU for locating and recognizing said human facial images and providing an output facial image recognition signal indicative of a particular person.

Claim 13 (previously amended): The toy of claim 12, wherein:

said toy further comprises a speaker and sound controls whereby sounds produced by said toy may be controlled;

said software is capable of recognizing expressions in said facial images and providing a facial expression recognition signal indicative of recognition of said expressions; and

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said sound controls are responsive to said facial expression recognition signal to modify the sounds produced by said toy in relation to said facial expression recognition signal.

Claim 14 (previously amended): The toy of claim 13, wherein:

said toy further comprises a microphone for the detection of sounds in the proximity of said toy; and

said software is adapted to recognize human speech included in sounds detected by said microphone and control the toy in response to recognized human speech.

Claim 15 (previously amended): The toy of claim 14, wherein:

said sound controls include software controls included in said software, said software controls being adapted to produce synthesized speech; and

said toy further comprises animation controls adapted to control one or more motions of the toy; and

said animation controls are responsive to said facial expression recognition signal to animate said toy in relation to said facial expression recognition signal; and

said software is further adapted to produce synthesized speech choreographed with mechanical animation in response to recognition of said facial images and in response to recognition of said expressions.

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Claim 16 (original): The toy of claim 15, further comprising software resident on said CPU for sending and receiving E-mail and providing other Internet-related interaction once said facial image is recognized.